

COMPONENTS

FAQ

Q Why are your graphics card 3D benchmarks run at 1,280x1,024?

A Most people have 17" or 19" LCDs, which have a maximum resolution of 1,280x1,024, so games can't be run at higher resolutions. We want to show how graphics cards will perform on most people's systems, rather than at higher or lower resolutions.

However, we run more powerful graphics at 1,600x1,200 and quote the scores in the reviews. This will help people with 20" or larger monitors to decide if a graphics card is for them. Finally, if a graphics card is struggling at 1,280x1,024, we'll drop the resolution and quality settings until games are playable, so those on a budget know what to expect from the cheaper cards.

By keeping the graphed scores consistent in all our reviews, though, you can compare performance between cards from month to month.

David Ludlow
Reviews Editor



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PNY GeForce 7600 GT

★★★★★

£160 inc VAT

PNY's GeForce 7600 GT is based on Nvidia's new mid-range chip. As you can see from the test results on the right, it copes with Call of Duty 2 at 1,280x1,024, although you may want to turn down the detail settings to achieve a smoother frame rate. In older games, such as Doom 3, the card performed brilliantly. Bumping up the resolution to 1,600x1,200 gave us a smooth frame rate of 35fps.



The GeForce 7600 GT is an impressive card with a core speed of 560MHz, 256MB of GDDR3 memory running at 700MHz (1.4GHz effective) and 12 pixel pipelines. It's a well-priced card that works fine at a resolution of 1,280x1,024, provided you turn down some settings. However, if you want a bit more performance, you can find GeForce 7800 GTs for around £200 including VAT.

David Ludlow

SUMMARY

- ✓ Fast graphics
- ✓ Doesn't need external power
- ✗ 7800 GT not much pricier

GRAPHICS CARD Nvidia 7600 GT graphics, PCI-E x16 interface, 560MHz core, 256MB GDDR3 RAM running at 700MHz (1.4GHz effective), two DVI interfaces, TV out
PART CODE B-G77600GN1F25XPB-G
SUPPLIER www.pcworld.co.uk
DETAILS www.pny-europe.com

PERFORMANCE (see page 58)

3DMark05	4,183			
Doom 3	48.01fps			
Call of Duty 2	24.51fps			
Splinter Cell	29.91fps			
		-50%	Reference	+50% +100%

GECUBE X1800GTO

★★★★★

£165 inc VAT

GeCube's X1800GTO uses ATI's latest mid-range graphics chip, which is priced at a similar level to Nvidia's 7600 GT (see review above). There's little to tell them apart on paper: the X1800GTO has a 500MHz core, 256MB of GDDR3 running at 500MHz (1GHz effective) and 12 pixel pipelines.

As you can see from the results, the cards have near-identical performance; the 7600 GT pushed ahead in Call of Duty 2, but the X1800GTO was much faster in 3DMark05.



This means that choosing between these cards is difficult. If you have an SLI motherboard, the 7600 GT makes more sense; if you want Crossfire, the X1800GTO is the better choice. However, if you're after a single card, either one is fine and it just depends on your own personal preference.

David Ludlow

SUMMARY

- ✓ Fast graphics
- ✓ Good price
- ✗ A tad pricier than the 7600 GT

GRAPHICS CARD ATI X1800GTO graphics, PCI-E x16 interface, 500MHz core, 256MB GDDR3 RAM running at 500MHz (1GHz effective), two DVI interfaces, TV out
PART CODE GC-X1800GTO-D-VID3
SUPPLIER www.lowestonweb.com
DETAILS www.gecube.com

PERFORMANCE (see page 58)

3DMark05	4,939			
Doom 3	47.81fps			
Call of Duty 2	20.21fps			
Splinter Cell	30.71fps			
		-50%	Reference	+50% +100%

Also consider...

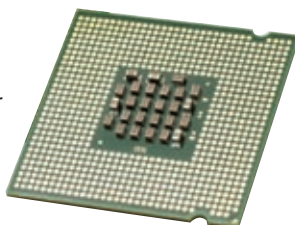
INTEL Pentium 4 640

★★★★★

£141 inc VAT



Intel's Pentium 4 640 processor supports 64-bit instructions and has a massive 2MB of level 1 cache. Combined with a clock speed of 3.2GHz, this adds up to a high-performance chip that'll cope with any application. It did well in our benchmarks and is good value, too.



PROCESSOR 3.2GHz processor, LGA775, 200MHz external bus, 16KB L2 cache, 2,048KB L1 cache PART CODE BX80547PG3200F
SUPPLIER www.savastore.com DETAILS www.intel.com

- ✓ Fast 64-bit instructions
- ✗ You may not need 64-bit application support

FULL REVIEW Jan 2006

AMD Athlon 64 3200+

★★★★★

£109 inc VAT



AMD's Athlon 64 3200+ is a powerful and relatively cheap 64-bit processor, which did well in all our benchmarks. It should appeal to overclockers in particular, because AMD processors are easy to tweak. The Athlon 64 3200+ is also an excellent choice for games and should help your PC muster a few more frames per second.



PROCESSOR 2GHz processor, Socket 939, 200MHz external bus, 128KB L2 cache, 512KB L1 cache PART CODE ADA3200BPBOX
SUPPLIER www.savastore.com DETAILS www.amd.com

- ✓ Powerful, easy to overclock
- ✗ Not as fast as Pentium 4 chips for video encoding

FULL REVIEW Jan 2006

ANTEC BK640B

★★★★

£53 inc VAT

Antec's BK640B is designed to house a microBTX motherboard. These are laid out differently from ATX motherboards, so a single fan can cool the processor and motherboard. This makes BTX-based PCs quieter and more efficient to cool.

Unfortunately, there are few BTX motherboards available and they tend to be more expensive than their ATX equivalents. As the BK640B can't be converted to house an ATX board, you need to be sure you want to take the BTX route.

The case is a budget model, but it feels well made and the silver front, while not to everyone's taste, is inoffensive. Inside, there's a fair amount of room with



two external 5¼" and two 3½" drive bays, plus two internal hard disk mounts. There's a bundle of cables tied neatly together, which you need to connect to your chosen motherboard to get the front ports and LEDs working.

Antec has fitted one of its 380W power supplies. Almost silent in operation, it has all the power connectors you'd expect to find, including PCI-E and SATA. However, the BK640B is a mystery to us: it's aimed at the budget PC builder, but with few BTX motherboards available, and those that are available being expensive, your money would be better spent on an ATX motherboard and case.

David Ludlow

SUMMARY

- ☒ Cheap case
- ☒ Quiet power supply
- ☒ BTX motherboards expensive

PC CASE MicroBTX case, four 3½" drive bays (two external), two 5¼" external drive bays, two USB2, one FireWire, front audio ports, 380W power supply
PART CODE 0761345-01641-4
SUPPLIER www.morecomputers.co.uk
DETAILS www.antec.com

ECS 945G-M3

★★★★★

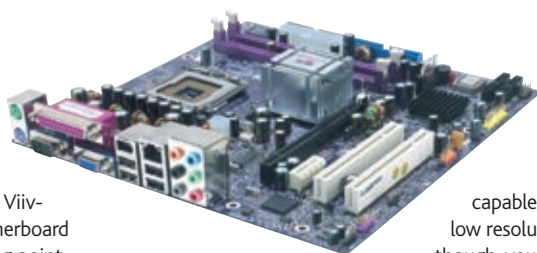
£65 inc VAT



ECS's 945G-M3 Viiv-compliant motherboard is a good starting point

for building your own media PC. Based on Intel's 945 chipset, this board supports the full range of Intel's processors, including dual core and those with an effective 1,066MHz frontside bus. If you don't fancy getting all the other Viiv components, such as Windows XP Media Center Edition, the 945G-M3 is a good choice for a normal Windows PC, too.

The microATX motherboard is ideal if you plan to build a small PC, while the onboard graphics mean you don't need to buy a separate graphics card. The 945G-M3 uses Intel's GMA950 graphics chip, which is an improvement over the previous generation and even



capable of playing older titles at low resolutions. For speedy graphics, though, you'll want to use the PCI-E

x16 slot and install a dedicated card. This leaves one PCI-E x1 slot and two PCI slots for further upgrades. You shouldn't need that many expansion cards, though, as the board has much of what you need onboard, including 7.1 channel audio, four SATA (with RAID) ports and two IDE ports.

With excellent performance and a very low price, ECS's 945G-M3 is great value. The board is well specified, it supports the full range of Intel's processors and it's perfect for anyone who wants to build a basic PC from scratch.

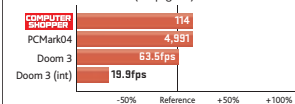
David Ludlow

SUMMARY

- ☒ Excellent value
- ☒ Full range of ports
- ☒ Few cables in the box

MOTHERBOARD Intel 945G chipset, supports Intel LGA775 processors, two PCI, one PCI-E x1, one PCI-E x16, two DIMM slots, 10/100 LAN, four SATA, four USB2
PART CODE 1434-4120
SUPPLIER www.pcnextday.co.uk
DETAILS www.ecs.com.tw

PERFORMANCE (see page 58)



ANTEC P150

★★★★★

£102 inc VAT



Antec's iPod-white steel P150 case looks great on the desk and is built to keep your PC silent. It doesn't rattle, it has acoustic insulation and the hard disks screw into rubber grommets to prevent vibrations echoing through the P150. A silent Antec Neo HE 430W modular power supply is also included, all of which makes this case excellent value.



SILENT PC CASE ATX case, 120mm fan, two USB2, one FireWire, two audio ports, two 5¼" drive bays, one external 3½" drive bay, four internal 3½" drive bays
PART CODE 0761345-019151-0
SUPPLIER www.morecomputers.com
DETAILS www.antec.com ☒ Attractive; comes with power supply ☒ Drive bays hard to access **FULL REVIEW** Mar 2006

LEADTEK 7900 GT Extreme

★★★★★

£282 inc VAT

Leadtek's 7900 GT Extreme is an overclocked Nvidia GeForce 7900 GT and it has the performance power to prove it. It is capable of running the latest games at resolutions of 1,600x1,200, although you'll get better frame rates at 1,200x1,024. It's an expensive card, but you won't get better performance for less than £300.



GRAPHICS CARD Nvidia 7900 GT graphics, PCI-E x16 interface, 520MHz core, 256MB GDDR3 RAM running at 715MHz (1.43GHz effective), two DVI interfaces, TV out
PART CODE W02G0084
SUPPLIER www.overclockers.co.uk
DETAILS www.leadtek.co.uk ☒ Excellent performance ☒ Doesn't pick up Freeview EPG **FULL REVIEW** May 2006

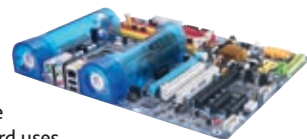
ECS KN1 SLI Extreme

★★★★★

£77 inc VAT



ECS's KN1 SLI Extreme motherboard uses



nVidia's nForce 4 SLI chipset, so you can use two graphics cards together. It also supports all Socket 939 Athlon 64 processors, so it's an ideal basis for a powerful computer.

Performance is excellent, and the motherboard has every port you could possibly want. For the price, this is excellent value.

MOTHERBOARD nForce 4 SLI chipset, supports AMD Socket 939 processors, three PCI, one PCI-E x16, one PCI-E x1, four DIMM slots, two Gigabit Ethernet, ECS Top Hat Flash, three IDE, six SATA2, four USB2, FireWire
PART CODE KN1 SLI
SUPPLIER www.pcnextday.co.uk **DETAILS** www.ecs.uk.com
☒ Fast; lots of connectors ☒ SLI mode blocks access to PCI-E x1 slot **FULL REVIEW** Nov 2005